

Notice of Allowability

Application No.

09/231,066

Examiner

Naghmeh Mehrpour

Applicant(s)

RUUTU ET AL.

Art Unit

2617

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to remark filed on 11/13/06.
2. ☒ The allowed claim(s) is/are 1-15.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material

5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

NAGHMEH MEHRPOUR
PRIMARY EXAMINER

Allowable Subject Matter

1. **Claims 1-15**, are allowed.

The following is an examiner's statement of reasons for allowance:

Regarding **claims 1, 7, 8** the present application teaches a method/apparatus/cellular radio network based positioning system for determining the position of a mobile station. For each base transceiver station or cell of the network, a fixed list of base transceiver stations is stored by a Mobile Positioning Centre. Each list identifies those base transceiver stations which enable the position of a mobile station served by the corresponding base transceiver station to be optimally determined. The list is transmitted to the mobile station via the serving base transceiver station and the mobile station determines an observed time difference for each of the listed base transceiver stations, relative to the serving base transceiver station, from signals broadcast by the listed base transceiver stations. The observed time differences are transmitted from the mobile station to the serving base transceiver station and are used by the network to compute the position of the mobile station as specifically mentioned on claims 1, 7, 8.

The closest prior art to the present application such as Munday et al. (US PATENT 6,201,803) teaches a method involves determining the differences in timing between the transmission of several base stations as measured at a mobile unit of the cellular

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radio system. From the timing differences the differences in the distances of the mobile unit from each of the base stations are determined. The location of the mobile unit is derived from the differences in distances so determined. The time division frame structures of the control channels of at least some of the base stations within radio range of the mobile unit are synchronized. The mobile unit determines the differences in timing at the mobile unit of a characteristic feature of the time division frame structure broadcast by the control channel of each base station.

Munday fails to teach a precision location determination where the coarse position of a mobile station is used data to select the correct pre-determined list of base transceiver stations to be used for location determination, and in which the lists of base transceiver stations are generated on the basis of geometrical in order to provide advantageous angles for the precise location determination as specifically mentioned on claims 1, 7, 8.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

2. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Naghmeh Mehrpour whose telephone number is 571-272-7913. The examiner can normally be reached on 8:00 5:00.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha Banks-Harold be reached (703) 305-4379.

The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

NM

March 30, 2007



NAGHMEH MEHRPOUR
PRIMARY EXAMINER